

WHAT IS CLAIMED IS:

1           1. A heat resistant laminated conveyor belt comprising a belt  
2 core layer made by a heat resistant non-metallic fiber substrate being  
3 impregnated with a fluororesin dispersion and then dried and sintered  
4 and a surface layer formed on said belt core layer via an adhesive layer  
5 made by a fluororesin film, said surface layer having a fabric structure  
6 using an element wire or wires made of a ferrous metal or having a  
7 structure in which said element wire or wires are arranged together.

1           2. A heat resistant laminated conveyor belt comprising a belt  
2 core layer made by a heat resistant non-metallic fiber substrate being  
3 impregnated with a fluororesin dispersion and then dried and sintered  
4 and a surface layer formed on said belt core layer via an adhesive layer  
5 made by a fluororesin film, said surface layer having a fabric structure  
6 using an element wire or wires made of at least one of a non-ferrous  
7 metal, inorganic compound, organic compound and carbon or having a  
8 structure in which said element wire or wires are arranged together.

1           3. A heat resistant laminated conveyor belt comprising a belt  
2 core layer made by a heat resistant non-metallic fiber substrate being  
3 impregnated with a fluororesin dispersion and then dried and sintered,  
4 an intermediate layer laminated on said belt core layer via an adhesive  
5 layer made by a fluororesin film, said intermediate layer being made by  
6 a heat resistant non-metallic fiber substrate being impregnated with a  
7 fluororesin dispersion and then dried and sintered, and a surface layer  
8 laminated on said intermediate layer via an adhesive layer made by a

9 fluororesin film, said surface layer having a fabric structure using an  
10 element wire or wires made of a ferrous metal or having a structure in  
11 which said element wire or wires are arranged together.

1 4. A heat resistant laminated conveyor belt comprising a belt  
2 core layer made by a heat resistant non-metallic fiber substrate being  
3 impregnated with a fluororesin dispersion and then dried and sintered,  
4 an intermediate layer laminated on said belt core layer via an adhesive  
5 layer made by a fluororesin film, said intermediate layer being made by  
6 a heat resistant non-metallic fiber substrate being impregnated with a  
7 fluororesin dispersion and then dried and sintered, and a surface layer  
8 laminated on said intermediate layer via an adhesive layer made by a  
9 fluororesin film, said surface layer having a fabric structure using an  
10 element wire or wires made of at least one of a non-ferrous metal,  
11 inorganic compound, organic compound and carbon or having a  
12 structure in which said element wire or wires are arranged together.

1 5. A heat resistant laminated conveyor belt as claimed in Claim  
2 1, wherein said ferrous metal is steel of iron steel, carbon steel,  
3 stainless steel or the like.

1 6. A heat resistant laminated conveyor belt as claimed in Claim  
2 3, wherein said ferrous metal is steel of iron steel, carbon steel,  
3 stainless steel or the like.

1 7. A heat resistant laminated conveyor belt as claimed in Claim  
2 2, wherein said non-ferrous metal is at least one of aluminum, copper  
3 and titanium, said inorganic compound is at least one of glass, alumina,  
4 silica, alumina silica and zirconia and said organic compound is at

5 least one of polyetheretherketone, polyimide, polyamideimide,  
6 polyetherimide, polyphenylene sulfide and aromatic allylate.

1 8. A heat resistant laminated conveyor belt as claimed in Claim  
2 4, wherein said non-ferrous metal is at least one of aluminum, copper  
3 and titanium, said inorganic compound is at least one of glass, alumina,  
4 silica, alumina silica and zirconia and said organic compound is at  
5 least one of polyetheretherketone, polyimide, polyamideimide,  
6 polyetherimide, polyphenylene sulfide and aromatic allylate.

1 9. A heat resistant laminated conveyor belt as claimed in Claim  
2 1, wherein said heat resistant non-metallic fiber substrate is of at least  
3 one of a glass fiber, carbon fiber, aramide fiber, aromatic allylate fiber  
4 and polyparaphenylenebenzobisoxazole (PBO) fiber.

1 10. A heat resistant laminated conveyor belt as claimed in  
2 Claim 2, wherein said heat resistant non-metallic fiber substrate is of  
3 at least one of a glass fiber, carbon fiber, aramide fiber, aromatic  
4 allylate fiber and polyparaphenylenebenzobisoxazole (PBO) fiber.

1 11. A heat resistant laminated conveyor belt as claimed in  
2 Claim 3, wherein said heat resistant non-metallic fiber substrate is of  
3 at least one of a glass fiber, carbon fiber, aramide fiber, aromatic  
4 allylate fiber and polyparaphenylenebenzobisoxazole (PBO) fiber.

1 12. A heat resistant laminated conveyor belt as claimed in  
2 Claim 4, wherein said heat resistant non-metallic fiber substrate is of  
3 at least one of a glass fiber, carbon fiber, aramide fiber, aromatic  
4 allylate fiber and polyparaphenylenebenzobisoxazole (PBO) fiber.

1 13. A heat resistant laminated conveyor belt as claimed in

2 Claim 1, wherein said adhesive layer is a resin film layer of a  
3 polytetrafluoroethylene (PTFE) resin, denatured polytetrafluoroethylene  
4 (denatured PTFE) resin, tetrafluoroethylene hexafluoropropylene  
5 copolymer (FEP) resin, tetrafluoroethylene perfluoroalkoxyethylene  
6 copolymer (PFA) resin, ethylene tetrafluoroethylene copolymer (ETFE)  
7 resin, ethylene chlorotrifluoroethylene copolymer (ECTFE) resin or the  
8 like.

1 14. A heat resistant laminated conveyor belt as claimed in  
2 Claim 2, wherein said adhesive layer is a resin film layer of a  
3 polytetrafluoroethylene (PTFE) resin, denatured polytetrafluoroethylene  
4 (denatured PTFE) resin, tetrafluoroethylene hexafluoropropylene  
5 copolymer (FEP) resin, tetrafluoroethylene perfluoroalkoxyethylene  
6 copolymer (PFA) resin, ethylene tetrafluoroethylene copolymer (ETFE)  
7 resin, ethylene chlorotrifluoroethylene copolymer (ECTFE) resin or the  
8 like.

1 15. A heat resistant laminated conveyor belt as claimed in  
2 Claim 3, wherein said adhesive layer is a resin film layer of a  
3 polytetrafluoroethylene (PTFE) resin, denatured polytetrafluoroethylene  
4 (denatured PTFE) resin, tetrafluoroethylene hexafluoropropylene  
5 copolymer (FEP) resin, tetrafluoroethylene perfluoroalkoxyethylene  
6 copolymer (PFA) resin, ethylene tetrafluoroethylene copolymer (ETFE)  
7 resin, ethylene chlorotrifluoroethylene copolymer (ECTFE) resin or the  
8 like.

1 16. A heat resistant laminated conveyor belt as claimed in  
2 Claim 4, wherein said adhesive layer is a resin film layer of a

3 polytetrafluoroethylene (PTFE) resin, denatured polytetrafluoroethylene  
4 (denatured PTFE) resin, tetrafluoroethylene hexafluoropropylene  
5 copolymer (FEP) resin, tetrafluoroethylene perfluoroalkoxyethylene  
6 copolymer (PFA) resin, ethylene tetrafluoroethylene copolymer (ETFE)  
7 resin, ethylene chlorotrifluoroethylene copolymer (ECTFE) resin or the  
8 like.

1 17. A heat resistant laminated conveyor belt as claimed in  
2 Claim 1, wherein said surface layer having the fabric structure using  
3 the element wire or wires or having the structure in which the element  
4 wire or wires are arranged together is a plurality of layers laminated  
5 one on another via an adhesive layer or layers.

1 18. A heat resistant laminated conveyor belt as claimed in  
2 Claim 2, wherein said surface layer having the fabric structure using  
3 the element wire or wires or having the structure in which the element  
4 wire or wires are arranged together is a plurality of layers laminated  
5 one on another via an adhesive layer or layers.

1 19. A heat resistant laminated conveyor belt as claimed in  
2 Claim 3, wherein one or both of said intermediate layer and belt core  
3 layer on the inner side of said surface layer are a plurality of layers.

1 20. A heat resistant laminated conveyor belt as claimed in  
2 Claim 4, wherein one or both of said intermediate layer and belt core  
3 layer on the inner side of said surface layer are a plurality of layers.

1 21. A heat resistant laminated conveyor belt manufacturing  
2 method comprising:

3 a first step of forming a belt core layer by a heat resistant non-

4 metallic fiber substrate being impregnated with a fluororesin dispersion  
5 and then dried and sintered and a second step of lapping a surface  
6 layer over said belt core layer via an adhesive layer made by a  
7 fluororesin film, said surface layer having a fabric structure using an  
8 element wire or wires made of a ferrous metal or having a structure in  
9 which said element wire or wires are arranged together, and bonding  
10 them together with said belt core layer by a heat sealing lamination  
11 process.

1 22. A heat resistant laminated conveyor belt manufacturing  
2 method comprising:

3 a first step of forming a belt core layer by a heat resistant non-  
4 metallic fiber substrate being impregnated with a fluororesin dispersion  
5 and then dried and sintered and a second step of lapping a surface  
6 layer over said belt core layer via an adhesive layer made by a  
7 fluororesin film, said surface layer having a fabric structure using an  
8 element wire or wires made of at least one of a non-ferrous metal,  
9 inorganic compound, organic compound and carbon or having a  
10 structure in which said element wire or wires are arranged together,  
11 and bonding them together with said belt core layer by a heat sealing  
12 lamination process.

1 23. A heat resistant laminated conveyor belt manufacturing  
2 method comprising:

3 a first step of forming a belt core layer by a heat resistant non-  
4 metallic fiber substrate being impregnated with a fluororesin dispersion  
5 and then dried and sintered, a second step of forming an intermediate

6 layer by a heat resistant non-metallic fiber substrate being impregnated  
7 with a fluororesin dispersion and then dried and sintered and lapping it  
8 over said belt core layer via an adhesive layer made by a fluororesin  
9 film and a third step of lapping a surface layer over said intermediate  
10 layer via an adhesive layer made by a fluororesin film, said surface  
11 layer having a fabric structure using an element wire or wires made of a  
12 ferrous metal or having a structure in which said element wire or wires  
13 are arranged together, and bonding them together with said belt core  
14 layer and intermediate layer by a heat sealing lamination process.

1 24. A heat resistant laminated conveyor belt manufacturing  
2 method comprising:

3 a first step of forming a belt core layer by a heat resistant non-  
4 metallic fiber substrate being impregnated with a fluororesin dispersion  
5 and then dried and sintered, a second step of forming an intermediate  
6 layer by a heat resistant non-metallic fiber substrate being impregnated  
7 with a fluororesin dispersion and then dried and sintered and lapping it  
8 over said belt core layer via an adhesive layer made by a fluororesin  
9 film and a third step of lapping a surface layer over said intermediate  
10 layer via an adhesive layer made by a fluororesin film, said surface  
11 layer having a fabric structure using an element wire or wires made of  
12 at least one of a non-ferrous metal, inorganic compound, organic  
13 compound and carbon or having a structure in which said element wire  
14 or wires are arranged together, and bonding them together with said  
15 belt core layer and intermediate layer by a heat sealing lamination  
16 process.

1           25. A heat resistant laminated conveyor belt manufacturing  
2 method as claimed in Claim 23, wherein one or both of said  
3 intermediate layer and belt core layer on the inner side of said surface  
4 layer are a plurality of layers lapped one on another via an adhesive  
5 layer or layers and then applied with the heat sealing lamination  
6 process.

1           26. A heat resistant laminated conveyor belt manufacturing  
2 method as claimed in Claim 24, wherein one or both of said  
3 intermediate layer and belt core layer on the inner side of said surface  
4 layer are a plurality of layers lapped one on another via an adhesive  
5 layer or layers and then applied with the heat sealing lamination  
6 process.